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AUTHOR Arndt, J. Richard
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ABSTRACT

No general comprehensive theory of underachievement exists despite much research having been performed and hundreds of articles having been published. Further, underachievement as a concept often seems to be divorced from the individual pupil's or student's unique problem(s) as an underachiever. Indeed, even the designation "underachiever" differs according to research designs used to collect data. The practitioner desiring to understand and help underachievers will benefit from acquaintance with various aspects of the subject such as definitions, classification systems, research inadequacies, improvement possibilities, and bibliographies of published research. The purpose of this paper is to present the kind of general overview which will provide that acquaintance. (Author)

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UNDERACHIEVEMENT: A GENERAL OVERVIEW

by

J. Richard Arndt, Ph. D.

July, 1971

Capsule Statement

No general comprehensive theory of underachievement exists despite much research having been performed and hundreds of articles having been published. Further, underachievement as a concept often seems to be divorced from the individual pupil's or student's unique problem(s) as an underachiever. Indeed, even the designation "underachiever" differs according to research designs used to collect data. The practitioner desiring to understand and help underachievers will benefit from acquaintance with various aspects of the subject such as definitions, classification systems, research inadequacies, improvement possibilities, and bibliographies of published research. The purpose of this paper is to present the kind of general overview which will provide that acquaintance.

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UNDERACHIEVEMENT: A GENERAL OVERVIEW

INTRODUCTION

Since the end of World War II, an extraordinary amount of research has been conducted on various aspects of student achievement in America's several levels of educational institutions. For example, Raph, Goldberg, and Passow (1966), concerned only with "bright underachievers," counted 146 investigations reported during the decade 1953-1962, compared to only 37 in the previous thirty years (1923-1952). Since 1962, the number of published studies has increased, as an examination of Dissertation Abstracts and the Education Index demonstrates.

DEFINITIONS

The underachieving youngster is, according to Peterson (1963), "a student who has the ability to achieve a level of academic success significantly above that which he actually attains." Raph, Goldberg, and Passow (1966) defined the "more able" underachiever as "one who, for whatever reason, fails to develop his potential maximally " (p. 2). These definitions are deceptive, however, because when put into operational terms, different students can be identified as "underachievers," depending on the method used, with little overlap. Pippert and Archer (1963) demonstrated this phenomenon when they used two major methods--high ability/poor grades and high ability/poor achievement test performance--in a ninth-grade class.

The former method identified as underachievers 14 boys and 7 girls and the latter method 7 boys and 12 girls, with only two children included in both groups. Hood and Swanson (1965) further demonstrated this when they examined student achievement in different types of Minnesota colleges. The mean grade-point averages (GPA) for freshmen in various colleges ranged from 1.9 to 2.8 (on a 4.0 scale) with little relationship found among the colleges between ability level of their freshmen classes and the mean GPA earned by the classes. The implication is that a student identified as an underachiever at one college might not be so designated at another. Wellington and Wellington (1961) also warned educators and researchers about the lack of agreement among educators and methods in accurately identifying underachievers (p. 8).

CLASSIFICATION SYSTEMS

Major Operational Designs

Thorndike (1963), Farquhar and Payne (1964), and Jackson (1968) have described and classified the main methodological designs used to operationally define, identify and subsequently study, under-, over- and normal-achieving students and their performance. In his small but excellent volume, Thorndike discussed two major designs: (a) the classic dichotomy of experimental and control groups with experimental manipulation and followup, and (b) examination of relationships among variables; i.e., "find out what variables correlate with achievement, and how they are related to each other" (p. 34).

The latter design had three variations: (a) prediction over time of the effect of variables under study, (b) consideration of all variables at one point in time (no antecedents), and (c) definition and comparison of two or three contrasting groups, usually "underachievers," "normal-achievers," and "overachievers."

Farquhar and Payne (1964) classified over- and under-achievement research into four descriptive categories.

> I. Central Tendency Splits. Under- and over-achievement is determined by dichotomizing a distribution of combined aptitude and achievement measures...(Cf. Dowd (1952), Pearlman (1952), Shaw and McCuen (1960)).
>
> II. Arbitrary Partitions--Middle Group Eliminated. Discrepancies are determined by contrasting extreme groups in achievement-aptitude distributions, and by eliminating a middle group...(Cf. Shaw and Brown (1957), Frankel (1960)).
>
> III. Relative Discrepancy Splits. Grade point average and aptitude predictors are ranked independently. Under- and over-achievement is determined by the discrepancy between the two ranks...(Cf. Diener (1960), Baymer and Patterson (1960), Duff and Siegel (1960)).
>
> IV. Regression Model Selection. A regression equation is used to predict achievement from aptitude measures. Under- and over-achievement is then determined on the basis of the discrepancy between predicted and actual achievement. (Cf. Gerberich (1941), Krug (1959)).

Jackson (1968) reported that "a review of the literature suggests at least three major approaches to the identification of underachievers," which did not substantively differ from the above classification. Although not citing Farquhar and Payne, his classification combined their first and second categories and duplicated the third and fourth.

Alternative Approaches

Other researchers have offered alternative approaches to viewing either underachievers or underachievement. Harris (1940) saw three factors involved in underachievement: ability (intelligence), effort (motivation) and circumstances (non-intelligence). Shaw (1961) pointed out that there was a great deal of difference between the "chronic" and "situational" underachiever. Kowitz (1965) discerned three dominant approaches to underachievement in the literature: (1) an illness involving the personality ("underachievement is, at best, an inaccurate diagnosis of the problem"), (2) a problem resulting from inadequate motivation, and (3) a problem stemming from poor educational administration or organization. Counselors and psychotherapists, such as Neugeboren (1958), Goldburgh and Penney (1962), Roth and Meyersberg (1963), Halpern (1965) and Bednar and Weinberg (1970), have studied the underachiever from their particular perspective and have offered suggestions as to how to deal with the problem. Butcher (1967) distinguished between intellective (GPA, achievement test scores) and non-intellective (personality, biographical and demographical data) factors.

It is important to realize that researchers have increasingly scrutinized non-intellective variables in the past decade, 1961-1970, because they believed that such factors held the key to variance unexplained by traditional intellective variables used to predict academic performance. These researchers hypothesized that non-intellective variables when added to intellective variables would give a more accurate

prediction formula. Frederiksen and Melville (1954) found that the Strong Vocational Interest Blank could be more predictive of academic success in an engineering school for non-compulsive students than for compulsive. They concluded that

> The usefulness of a test may be improved by discovering subgroups of people for which it is especially appropriate as a predictor. Such a method may not only permit more accurate predictions for the members of the subgroups, but for other members of the group may reduce errors in prediction which are due to the use of a less valid predictor.

Binder (1966), Lunneborg and Lunneborg (1966) and Standridge (1968) all indicated that non-intellective variables could add significantly to prediction of academic performance.

Hilton and Meyers (1967) reached a different conclusion. They investigated the contribution of non-intellective biographical questionnaire data to academic prediction from seven studies published between 1950 and 1964 and stated that each...

> of these studies has reported significant correlation coefficients using a different biographical inventory. None of them has demonstrated, however, that a comprehensive battery of ability and achievement tests would not be more highly related to academic performance or that biographical data would contribute anything unique beyond such a battery.

It should be noted that the above quotation is an excellent example of the two broad, major categories of research studies that this writer has delineated: (1) Predictive studies in which intellective and/or non-intellective variables are analyzed to determine which factors individually or in combination best predict underachievement, or which designs are most efficient, and (2) Descriptive studies, in which over- and underachievers are identified and then compared on various

intellective and/or non-intellective variables. Some of these studies test hypotheses, others are exploratory, useful only for hypothesis construction.

RESEARCH INADEQUACIES

Much confusion has occurred and findings nullified for general reference because oftentimes researchers have not adequately and precisely described their research designs, statistical analyses, populations, samples, hypotheses and/or conclusions. (Cf. critiques by Anderson (1961) and Shaw (1961).) In the particular area of underachievement, Peterson (1963) bluntly asserted that much research proved to be of little value because most researchers neglected the individual, looking instead at the phenomenon of underachievement. He stated further that it was difficult to compare results because of different kinds of designs and analyses. Although his criticism has validity, not all researchers have erred in these ways.

Other problems exist as well. Harris (1940) stated that in many studies he reviewed, sex and intelligence were not held constant, statistical significance was not mentioned and heterogeneity of subjects occurred. Lavin (1965) stated that the failure of many studies to analyze data separately for males and females hindered comparisons of findings, and that more research was needed in which sex differences were assessed and reasons for differences were examined (p. 58). Also, Farquhar and Payne (1964) included separation by sex as a necessary criterion for effective selection of over- and underachievers. (Cf. Clark (1953).) These oversights were found to

occur is subsequent studies.

In some studies sample sizes seemed too small to warrant anything more than the most tentative of conclusions or possible factors to investigate further. Thorndike (1963) stated that

> ...the more of achievement that we are already accounting for by known predictors, the larger our experimental groups must become if we are to establish the influence of further, more subtle, influences. Correlational studies of factors related to gain in achievement that are based on 100 cases or less will generally be a waste of effort (p. 39).

Thorndike also stated that much research had little or no meaning because of (1) errors in measurement, (2) heterogeneity of criterion, (3) limited scope of predictors, and (4) impact of unmeasured intervening variables upon the individual (pp. 4-5).

Lavin (1965) criticized many researchers who examined extreme groups and ignored the middle group on the faulty assumption that only a linear relationship existed between the extreme groups. Lavin stated that the middle group of achievers must also be studied in case a situation would arise in which a relationship was not linear; i.e., the extremes seem to be identical but different from the central group, but if the middle group were deleted from the study, one would not know this. (Cf. Goldman (1961), who summarized his review of the literature by stating, "Especially noteworthy is the fact that maladjustment can lead either to underachievement or to overachievement.")

Raph, Goldberg and Passow (1966) stated the "burden of proof" lay with the researcher in "designating a student as an underachiever....He must have confidence in his predictors, in

what is being predicted, and in the comparability of the samples he identifies to study" (p. 10). This statement is important because the terms "over-" and "under-achievement" really should be "over-" and "under-prediction" (Cf. Chapter I, pp. 1, 5).

FOCUS: THE INDIVIDUAL

Peterson (1963) was not alone in his attitude that the underachieving student's plight must be considered mainly as an individual problem. C. F. Combs (1964) stated that underachievement cannot be treated in terms of any one facet of the problem, rather, underachievement must be understood to be a completely personal and consistent adaptation of the underachiever to his needs and capacities as he uniquely experiences them. Shaw and Brown (1957) hypothesized that scholastic underachievement on the part of bright college students was not an easily modifiable phenomenon, but instead was related to the basic personality matrix of the individual. Passow and Goldberg (1958) found that underachievement among gifted high school students appeared to be symptomatic of a deeper, more basic personal-social problem. These comments are especially pertinent to "chronic" underachievers and are amplified in the next section concerning improvement possibilities in which research studies by counselors and psychotherapists are reviewed.

Findings of some researchers are appropriate for both "situational" and "chronic" underachievers. Ratchick (1953) studied 52 highly intelligent high school students and concluded that "since no simple element was found to be related to all cases of underachievement, an investigation

simultaneously includes studies of the various phases of the educational process." Barrett (1957) intensively studied 32 gifted high school students and said that "only by a careful and thorough study of each individual personality can we find the reasons for underachievement." Abe (1966) reinforced this position by stating that results from his study of non-intellective indices of academic achievement indicated that many factors were involved, and that no single measure was adequate for all. Kisch (1967) studied sophomore male underachievers in the College of Literature, Science and Arts at the University of Michigan and concluded that underachievers did not utilize their abilities as did overachievers. Rather than lumping them all together, Kisch differentiated four subgroups of underachievers: (1) overcompensating for feelings of social inadequacy by adopting an extroverted stance, (2) highly motivated but socially isolated, angry and alienated, (3) well adjusted socially, but having weak academic interests, and (4) authoritarian, conformist, non-intellectual and, therefore, poorly fitted for majoring in this particular liberal arts program. Finally, Kowitz and Armstrong (1961) concluded that many special programs in elementary and secondary schools devised to treat underachieving individuals had not found great success because they were not predicted upon the fact that underachievement is an individual problem, varying in cause(s) from child to child.

IMPROVEMENT POSSIBILITIES

Underachievers can be helped to improve their performance. The situation is not as bleak as some educators would have one believe. Appropriate counseling or psychotherapy can be instrumental in helping the individual perform better academically and in other behavior patterns (Baymur and Patterson, 1960, Halpern, 1965). If a student is performing poorly in academics, he often is performing poorly in other behaviors as well. If he is helped to do better in one area, he may concurrently do better in other areas. Roth and Meyersberg (1963) also concluded that "...the counseling relationship can serve as the impetus to change the achievement patterns." Their conclusion was based on extensive clinical experience in the Psychological Services counseling program at Hampton Institute.

Drasgow (1967) formulated three postulates after counseling with at least twelve "gross" college underachievers who evidently were recent high school graduates:

> 1. A role of the counselor may be to help the underachieving client divorce himself from an alien curriculum and discover an appropriate one.
>
> 2. The actual feeling of failure may be prerequisite to this type of client's becoming "ready" for counseling.
>
> 3. ...insight is (not) necessary for the progress of counseling (i.e., for counseling this kind of client).

Motto (1959) recognized Drasgow's contribution, but offered conflicting conclusions based on a much different population of underachievers--31 "gifted" veterans. The addage of only generalizing to the study population is again validated by these studies.

Neugeboren (1958), a psychiatric social worker, explored problems of 48 Yale University men who entered the school between 1948-1954 and who were seen at the Division of Student Mental Hygiene. He summarized that (1) many possible explanations existed for under-and overachievement, (2) "...similarities in patterns of academic functioning occurred for students given the same diagnosis...." and (3) that the severity of emotional disturbances cannot be used as the sole criterion for predicting college success. Point two is especially significant as are two other statements made in the report: (1) problems of unadjusted underachievers often result from conflicts with parents regarding the choice of major (Cf. point one of Drasgow above), and (2) "Only students whose academic underachievement is seen as a symptom of inner problems would be expected to improve their grades after therapy."

Goldburgh and Penney (1962) developed and offered an approach to help underachievers improve their performance. Their "primary focus" was on "...speedy rehabilitation rather than long-term therapy." They called their technique "sector counseling" representing a form of "minimum change therapy" (Tyler, 1960).

Bednar and Weinberg (1970) contributed a significant study to the literature when they investigated the ingredients of successful treatment programs for underachieving students. They investigated 23 treatment programs for underachievers which used various counseling techniques. They were seeking to answer the question, "What dimensions of counseling

treatment programs are associated with improved academic performance?" rather than merely asking, "Does counseling contribute to improved academic performance?" They concluded that:

> The most potent variables that emerge from a survey of the research literature are duration and structure of the treatment method. Not only are highly structured and lengthy programs the most effective in improving academic performance, as measured by GPA, but the effects are lasting. Though structured programs are generally more viable than unstructured programs, consideration must be given to the population under study. For example, independent students seem to profit most by an unstructured situation, which is, however, lengthy.
>
> When the treatment consists of some form of counseling, the higher the therapeutic conditions (empathy, warmth, genuineness), the more effective the treatment. From the standpoint of economy as well as effectiveness, group counseling appears to hold more promise as a treatment method than individual counseling methods or academic study courses. However, counseling, either individual or group, aimed at the dynamics of underachievement and used in conjunction with an academic studies course seems the most potent of all treatment methods.

Wrenn and Humber (1941) indicated that improving the study habits of some underachievers might help them improve scholastically. De Sena (1966) found that underachieving college students in science curricula revealed a greater willingness to discuss their problems with college personnel than normal- and overachievers, and that the Mooney Problem Check List was helpful in determining problems troubling them. Stebens (1968) found that for some students, taking a reading skills improvement program might prove beneficial. Finally, O'Donnel (1968) observed that male freshmen underachievers at California State Polytechnic College often significantly improved their performance after changing majors.

BIBLIOGRAPHIES

Several researchers have reviewed the literature and compiled bibliographies regarding various aspects of underachievement among students at different grade and ability levels. Harris (1940) listed 328 references after his review of the literature from 1930-1937 for factors affecting college grades. Garrett (1949) listed 194 references when he reviewed and interpreted investigations related to scholastic success in colleges of arts and sciences and teachers colleges. Travers (1949) cited 272 studies after discussing significant research on the prediction of academic success. Bristow (1959) discussed low achievement and added an annotated bibliography. Reviewing the measurement of achievement motivation, Krumbolz (1957) compiled 44 references. Since then, Farquhar et al (1965) compiled a bibliography of over 230 references concerning motivation and academic performance. Gowan (1960) summarized the findings of many studies concerning the factors of achievement in high school and college. Anderson (1961) edited a book about research on academically talented students. Miller (1961) edited a United States Office of Education bulletin on guidance for underachievers with superior ability which included an excellent chapter by Shaw (1961) reviewing articles defining and identifying underachievers of superior ability. Gowan (1961) compiled an annotated bibliography on academically talented students. Lavin (1965) comprehensively reviewed both intellective and non-intellective factors influencing academic achievement. Goldberg (1965) compiled a lengthy bibliography

while reviewing research on talented youngsters. Raph, Goldberg and Passow (1966) also published a bibliography regarding bright underachievers. In his doctoral thesis, Butcher (1967) extensively reviewed theory and research about student self-concept and academic achievement.

Finally, Arndt (1970) reviewed the literature with regard to a fairly comprehensive list of personality and biographical (non-intellective) variables researchers have examined in relations to under- and overachievement. Although no single personality factor was found to universally apply to all types of student populations, in general it seemed that most students designated as achievers and overachievers shared the following characteristics in contrast to underachievers: (1) better adjustment, (2) better self-concept of ability, (3) higher motivation, (4) more maturity, (5) better organization, (6) more efficiency, and (7) less hostility toward parents and other authority figures.

SUMMARY

An underachiever was defined as "a student who has the ability to achieve a level of academic success significantly above that which he actually attains" (Peterson, 1963); however, it was shown that this definition is deceptive since different operational procedures often identify different students as over- and underachievers. It was further pointed out that under- and overachievement actually might be more accurately called under- and overprediction. Major operational designs were reviewed, after which other approaches from the

literature were cited and research inadequacies briefly discussed. Attention was then focussed on the individual and possible techniques and procedures which might help him escape his problem of poor achievement. Several bibliographies and reviews of the literature regarding over- and under-achievement were then cited to which one could refer for further study.

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